Environmental Economics and Policy

Bachelor of Arts (BA) or Bachelor of Science (BS)

The College of Natural Resources and the College of Letters and Science jointly offer the undergraduate major in Environmental Economics and Policy (EEP). This major offers an opportunity to explore aspects of economic and political institutions that affect the development and management of natural resources and the environment. The program takes a problem-solving approach to issues involving renewable and fixed natural resources, and it is based on a foundation in microeconomic theory and the economics of resources and the environment. The Environmental Economics and Policy program is offered by the Department of Agricultural and Resource Economics.

This major leads to a Bachelor of Science (BS) degree (for students in the College of Natural Resources) or a Bachelor of Arts (BA) degree (for students in the College of Letters and Science).

Students who graduate with a degree in Environmental Economics and Policy go on to a variety of jobs or graduate programs.

Admission to the Major

Freshman students may apply directly to the major, or may select the College of Natural Resource's undeclared option, and declare the major by the end of their fourth semester. For further information regarding how to declare the major after admission, including information on a change of major of change of college, please see the College of Natural Resources Undergraduate Student Handbook (http://www.cnr.berkeley.edu/site/forms/oisa/undergrad_handbook.pdf) .

Honors Program

Students with a GPA of 3.6 or higher may enroll in the College of Natural Resources Honors Program (H196) once they have reached upper division standing. To fulfill the program requirements, students design, conduct, and report on an individual research project working with a faculty sponsor. For further information about registration for the Honors Symposium or the Honors requirements, please see the College of Natural Resources website (http://nature.berkeley.edu/site/honors_program.php) .

Minor Program

The minor program offers interested students an opportunity to explore aspects of economic and political institutions that affect the development and management of natural resources and the environment. For information regarding how to declare the minor, please contact the department.

In addition to the University, campus, and college requirements, listed on the College Requirements tab, students must fulfill the below requirements specific to their major program.

General Guidelines

1. All courses taken to fulfill the major requirements below must be taken for graded credit, other than courses listed which are offered on a *Pass/No Pass* basis only. Other exceptions to this requirement are noted as applicable.
2. A minimum cumulative grade point average (GPA) of 2.0 is required.
3. A minimum GPA of 2.0 in upper-division major requirements is required.
4. At least 15 of the 36 required upper-division units must be taken in the College of Natural Resources (except for students majoring in Environmental Economics and Policy; please see the EEP major adviser for further information).
5. A maximum of 16 units of Independent Study (courses numbered 97, 98, 99, 197, 198, and 199) may count toward graduation, with a maximum of 4 units of Independent Study per semester.
6. No more than 1/3 of the total units attempted at UC Berkeley may be taken *Pass/No Pass*. This includes units in the Education Abroad Program and UC Intercampus Visitor or Exchange Programs.
7. A maximum of 4 units of Physical Education courses will count toward graduation.

For information regarding residence requirements and unit requirements, please see the College Requirements tab.

Lower-division Requirements

Principles of Microeconomics: Select one of the following:		
ENVECON C1	Introduction to Environmental Economics and Policy	
ECON 1	Introduction to Economics	
ECON 2	Introduction to Economics--Lecture Format	
ECON C3	Introduction to Environmental Economics and Policy	
Calculus: Select one of the following sequences:		
MATH 1A & MATH 1B	Calculus and Calculus	
MATH 16A & MATH 16B	Analytic Geometry and Calculus and Analytic Geometry and Calculus	
Statistics: Select one of the following:		
STAT 20	Introduction to Probability and Statistics	
STAT 21	Introductory Probability and Statistics for Business	
STAT 25	Course Not Available	

Upper-division Requirements

Intermediate Microeconomics: Select one of the following:		
ENVECON 100	Microeconomic Theory with Application to Natural Resources	
ECON 100A	Economic Analysis--Micro	
ECON 101A	Economic Theory--Micro	
Environmental or Natural Resource Economics		
ENVECON C101	Environmental Economics	4
or ENVECON C10	Natural Resource Economics	
Quantitative Methods: Select one of the following:		

ENVECON C115	Modeling and Management of Biological Resources [1]
ENVECON C118	Introductory Applied Econometrics [1]
Upper-division electives	
Select at least five courses to form an Area of Concentration (see the major adviser for further information)	
Three courses must be upper-division ENVECON courses	
A maximum of two courses may be selected from other departments; see major adviser for a list of approved courses	

[1] See the major adviser for a list of other pre-approved courses.

Students who have a strong interest in an area of study outside their major often decide to complete a minor program. These programs have set requirements and are noted officially on the transcript in the memoranda section, but they are not noted on diplomas.

General Guidelines

1. All courses taken to fulfill the minor requirements below must be taken for graded credit.
2. A minimum grade point average (GPA) of 2.0 is required for courses used to fulfill the minor requirements.
3. No more than one upper-division course may be used to simultaneously fulfill requirements for a student's major and minor programs.

At least one of the five upper-division courses below must be taken during the academic year (i.e., not all courses may be Summer Session courses).

Lower-division Prerequisite

Select one of the following sequences:

MATH 16A & MATH 16B	Analytic Geometry and Calculus and Analytic Geometry and Calculus
MATH 1A & MATH 1B	Calculus and Calculus

Minor Requirements

Principles of Micro Economics: Select one of the following:		
ENVECON C1/ECON C3	Introduction to Environmental Economics and Policy	
ECON 1	Introduction to Economics	
ECON 2	Introduction to Economics--Lecture Format	
Intermediate Microeconomics: Select one of the following:		
ENVECON 100	Microeconomic Theory with Application to Natural Resources	
ECON 100A	Economic Analysis--Micro	
ECON 101A	Economic Theory--Micro	
Environmental and Natural Resource Economics		
ENVECON C101/ ECON C125	Environmental Economics	4
ENVECON/ ECON C102	Natural Resource Economics	4
Quantitative Methods: Select one of the following:		
ENVECON C115/ ESPM C104	Modeling and Management of Biological Resources	
ENVECON/ IAS C118	Introductory Applied Econometrics	
ENVECON/ ESPM C183	Forest Ecosystem Management	
ECON C110/ POL SCI C135	Game Theory in the Social Sciences	
ECON 140	Economic Statistics and Econometrics	
ECON 141	Econometric Analysis	
ECON C142/ POL SCI C131A/ PUB POL C142	Applied Econometrics and Public Policy	
ENE,RES C130/ EPS C120	Course Not Available	
ESPM 102B	Natural Resource Sampling	
ESPM 102C	Resource Management	
PB HLTH 140	Introduction to Risk and Demographic Statistics	
PB HLTH 142	Introduction to Probability and Statistics in Biology and Public Health	
STAT 131A	Introduction to Probability and Statistics for Life Scientists	
Natural Resource Analysis and Policy: Select one of the following:		
ENVECON 131	Globalization and the Natural Environment	
ENVECON 140	Economics of Race, Agriculture, and the Environment	
ENVECON 141	Course Not Available	
ENVECON 142	Industrial Organization with Applications to Agriculture and Natural Resources	
ENVECON 143	Economics of Innovation and Intellectual Property	
ENVECON 145	Health and Environmental Economic Policy	
ENVECON 147	Regulation of Energy and the Environment	
ENVECON C15	Economic Development	
ENVECON 152	Advanced Topics in Development and International Trade	
ENVECON 153	Population, Environment, and Development	
ENVECON 154	Economics of Poverty and Technology	
ENVECON 161	Advanced Topics in Environmental and Resource Economics	
ENVECON 162	Economics of Water Resources	
ENVECON C17	The Economics of Climate Change	
ENVECON C18	Ecological Economics in Historical Context	
ENVECON C18	International Trade	

Undergraduate students in the College of Letters and Science must fulfill the following requirements in addition to those required by their major program.

For detailed lists of courses that fulfill college requirements, please see the College of Letters and Sciences (http://guide.berkeley.edu/archive/2014-15/undergraduate/colleges-schools/letters-science) page in this bulletin.

Entry Level Writing

All students who will enter the University of California as freshmen must demonstrate their command of the English language by fulfilling the Entry Level Writing Requirement. Fulfillment of this requirement is also a prerequisite to enrollment in all reading and composition courses at UC Berkeley.

American History and American Institutions

The American History and Institutions requirements are based on the principle that a U.S. resident graduated from an American university should have an understanding of the history and governmental institutions of the United States.

American Cultures

American Cultures is the one requirement that all undergraduate students at Cal need to take and pass in order to graduate. The requirement offers an exciting intellectual environment centered on the study of race, ethnicity and culture of the United States. AC courses offer students opportunities to be part of research-led, highly accomplished teaching environments, grappling with the complexity of American Culture.

Quantitative Reasoning

The Quantitative Reasoning requirement is designed to ensure that students graduate with basic understanding and competency in math, statistics, or computer science. The requirement may be satisfied by exam or by taking an approved course.

Foreign Language

The Foreign Language requirement may be satisfied by demonstrating proficiency in reading comprehension, writing, and conversation in a foreign language equivalent to the second semester college level, either by passing an exam or by completing approved course work.

Reading and Composition

In order to provide a solid foundation in reading, writing and critical thinking the College requires two semesters of lower division work in composition. Students must complete a first-level reading and composition course by the end of their second semester and a second-level course by the end of their fourth semester.

Breadth Requirements

The undergraduate breadth requirements provide Berkeley students with a rich and varied educational experience outside of their major program. As the foundation of a liberal arts education, breadth courses give students a view into the intellectual life of the University while introducing them to a multitude of perspectives and approaches to research and scholarship. Engaging students in new disciplines and with peers from other majors, the breadth experience strengthens interdisciplinary connections and context that prepares Berkeley graduates to understand and solve the complex issues of their day.

Unit Requirements

- 120 total units, including at least 60 L&S units
- Of the 120 units, 36 must be upper division units
- Of the 36 upper division units, 6 must be taken in courses offered outside your major department

Residence Requirements

For units to be considered in "residence," you must be registered in courses on the Berkeley campus as a student in the College of Letters and Science. Most students automatically fulfill the residence requirement by attending classes here for four years. In general, there is no need to be concerned about this requirement, unless you go abroad for a semester or year or want to take courses at another institution or through University Extension during your senior year. In these cases, you should make an appointment to see an adviser to determine how you can meet the Senior Residence Requirement.

Note: Courses taken through UC Extension do not count toward residence.

Senior Residence Requirement

After you become a senior (with 90 semester units earned toward your B.A. degree), you must complete at least 24 of the remaining 30 units in residence in at least two semesters. To count as residence, a semester must consist of at least 6 passed units. Intercampus Visitor, EAP, and UC Berkeley-Washington Program (UCDC) units are excluded.

You may use a Berkeley summer session to satisfy one semester of the Senior Residence Requirement, provided that you successfully complete 6 units of course work in the Summer Session and that you have been enrolled previously in the College.

Modified Senior Residence Requirement

Participants in the UC Education Abroad Program (EAP) or the UC Berkeley-Washington Program (UCDC) may meet a Modified Senior Residence Requirement by completing 24 (excluding EAP) of their final 60 semester units in residence. At least 12 of these 24 units must be completed after you have completed 90 units.

Upper Division Residence Requirement

You must complete in residence a minimum of 18 units of upper division courses (excluding EAP units), 12 of which must satisfy the requirements for your major.

For College Requirements, please refer to the College of Natural Resources (http://guide.berkeley.edu/archive/2014-15/undergraduate/colleges-schools/natural-resources/#collegerequirementstext) .

Learning Goals for the Major

1. Produce graduates with an excellent education in applied economics, with a particular expertise in one of three fields: environmental economics and policy; development economics, or agricultural economics
2. Prepare students for successful careers and further studies in graduate programs in a variety of applied fields within Economics
3. Produce graduates who have the capacity for continued learning throughout their careers and who will have a significant, positive impact on their professions
4. Encourage the development of the ethics, skills, and motivation necessary to serve society

Environmental Economics and Policy

ENVECON C1 Introduction to Environmental Economics and Policy 4 Units
Introduction to microeconomics with emphasis on resource, agricultural, and environmental issues.
Rules & Requirements

Prerequisites: Mathematics 32

Credit Restrictions: Students will receive 2 units of credit for 1 after taking Economics 1.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Also listed as: ECON C3

ENVECON 39D Freshman/Sophomore Seminar 1.5 - 4 Units
Freshman and sophomore seminars offer lower division students the opportunity to explore an intellectual topic with a faculty member and a group of peers in a small-seminar setting. These seminars are offered in all campus departments; topics vary from department to department and from semester to semester.
Rules & Requirements

Prerequisites: Priority given to freshmen and sophomores

Repeat rules: Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 1.5-4 hours of seminar per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: The grading option will be decided by the instructor when the class is offered. Final exam required.

ENVECON 100 Microeconomic Theory with Application to Natural Resources 4 Units
Covers the basic microeconomic tools for further study of natural resource problems. Theory of consumption, production, theory of the firm, industrial organization, general equilibrium, public goods and externalities. Applications to agriculture and natural resources.
Rules & Requirements

Prerequisites: C1 or Economics 1 or C3 and Mathematics 16A or consent of instructor

Credit Restrictions: Students will receive 2 units of credit for Environmental Economics 100 after completing Economics 100A, Economics 101A, or Undergraduate Business Administration 110.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Ligon and Rausser

ENVECON C101 Environmental Economics 4 Units
Theories of externalities and public goods applied to pollution and environmental policy. Trade-off between production and environmental amenities. Assessing nonmarket value of environmental amenities. Remediation and clean-up policies. Environment and development. Biodiversity management.
Rules & Requirements

Prerequisites: 100, Mathematics 16A-16B, or Economics 100A or 101A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Zilberman

Also listed as: ECON C125

ENVECON C102 Natural Resource Economics 4 Units
Introduction to the economics of natural resources. Land and the concept of economic rent. Models of optimal depletion of nonrenewable resources and optimal use of renewable resources. Application to energy, forests, fisheries, water, and climate change. Resources, growth, and sustainability.
Rules & Requirements

Prerequisites: 100, or Economics 100A or 100B

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Sunding

ENVECON C115 Modeling and Management of Biological Resources 4 Units
Models of population growth, chaos, life tables, and Leslie matrix theory. Harvesting and exploitation theory. Methods for analyzing population interactions, predation, competition. Fisheries, forest stands, and insect pest management. Genetic aspects of population management. Mathematical theory based on simple difference and ordinary differential equations. Use of simulation packages on microcomputers (previous experience with computers not required).
Rules & Requirements

Prerequisites: A course that includes differential and integral calculus

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of laboratory per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Getz

Also listed as: ESPM C104

ENVECON C118 Introductory Applied Econometrics 4 Units
Formulation of a research hypothesis and definition of an empirical strategy. Regression analysis with cross-sectional and time-series data; econometric methods for the analysis of qualitative information; hypothesis testing. The techniques of statistical and econometric analysis are developed through applications to a set of case studies and real data in the fields of environmental, resource, and international development economics. Students learn the use of a statistical software for economic data analysis.
Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Sadoulet

Also listed as: IAS C118

ENVECON 131 Globalization and the Natural Environment 3 Units
An examination of the environmental effects of globalization. How has increased international trade, the integration of factor markets, and the adoption of international agreements affected the environment? Case studies include the environmental impact of GATT/WTO and NAFTA. Multi-disciplinary approach examines the actual laws and institutions and the economic theories of globalization, in addition to the empirical evidence of globalization's environmental effects.
Rules & Requirements

Prerequisites: Intermediate micro-economic theory or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Karp

ENVECON 140AC Economics of Race, Agriculture, and the Environment 3 Units
This course examines whether and how economic processes explain shifting formations of race and differential experiences among racial groups in U.S. agricultural and environmental systems. It approaches economic processes as organizing dynamics of racial differentiation and integration, and uses comparative experience among different racial and ethnic groups as sources of evidence against which economic theories of differentiation and integration can be tested.
Rules & Requirements

Prerequisites: 1, or one lower division course in a social science, or consent of instructor

Requirements this course satisfies: Satisfies the American Cultures requirement

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Romm

ENVECON 142 Industrial Organization with Applications to Agriculture and Natural Resources 4 Units
Organization and performance of agricultural and resource markets. Conduct of firms within those markets, such as price competition, product differentiation, predatory pricing, vertical integration, dealer networks and advertising. The role of public policy in the markets. Case studies include oil cartel OPEC, agricultural cooperatives, vertical integration of food processors and franchising of fast-food chains. Discussion sections cover empirical applications of theory presented during lectures for current environmental and agricultural policies.
Rules & Requirements

Prerequisites: Environmental Economics and Policy 100 or Economics 100A or 101A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Villas-Boas

ENVECON 143 Economics of Innovation and Intellectual Property 3 Units
This course addresses the economics of research and incentives for innovation including intellectual property rights. Topics include the standard modern economics of invention; modern intellectual property rights; innovation examples from agriculture, energy, pharmaceuticals, software, and electronics; the roles of the public and private sectors; innovation and market structure; the needs of the poor; and global intellectual property negotiations.
Rules & Requirements

Prerequisites: 100 or Economics 100A or 101A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Wright

ENVECON 145 Health and Environmental Economic Policy 3 Units
This course introduces students to key issues and findings in the field of health and environmental economics. The first half of the course focuses on the theoreticl and statistical frameworks used to analyze instances of market failure in the provision of health and environmental goods. The second half focuses on policy-relevant empirical findings in the field.
Rules & Requirements

Prerequisites: Intermediate microeconomics, 100, Economics 100 or 101A, and some statistics

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Anderson

ENVECON 147 Regulation of Energy and the Environment 4 Units
This is an applied economics course on government regulation of energy with an emphasis on policies that seek to mitigate the impact of energy production and consumption on the environment. The course is designed to help students make connections between economic concepts and real world regulatory policy questions and issues.
Rules & Requirements

Prerequisites: Intermediate microeconomic theory and calculus

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Fowlie

ENVECON C151 Economic Development 4 Units
Problems of underdevelopment and poverty, policy issues, and development strategy.
Rules & Requirements

Prerequisites: 100, Economics 100A or 101A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer:
6 weeks - 8 hours of lecture and 2 hours of discussion per week
8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: de Janvry

Also listed as: ECON C171

ENVECON 152 Advanced Topics in Development and International Trade 3 Units
This course discusses recent efforts to understand behavior and institutions in village economies, with particular attention paid to the importance of risk. Economic analysis of savings, consumption, insurance, production, trade, welfare distribution and institutions of villages in developing countries. Roughly equal parts of theory, evidence, and policy.
Rules & Requirements

Prerequisites: 100 or Economics 100A

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Magruder

ENVECON 153 Population, Environment, and Development 3 Units
This course takes an interdisciplinary approach to the complex interactions between population, environmental change, and economic development, including the leading theories for understanding these interactions. The origins and history of current debates are discussed as well as some of the major issues stemming from these debates, such as immigration, international trade, family planning policies and concerns over the global commons. Specific natural resources and services like fresh water, food supply, and forest cover are analyzed as case studies. Policy options for sustainable development are discussed.
Rules & Requirements

Prerequisites: Intermediate microeconomic theory or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

ENVECON 154 Economics of Poverty and Technology 3 Units
Introduction to the economic framework underlying the use of technology to address rural poverty in developing countries. Analyzes the path of technology development from innovation and design to the adoption and use of technology in rural economies. Focuses on technologies related to agricultural production, processing, market access, value chains, and climate change.
Rules & Requirements

Prerequisites: Intermediate microeconomics

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Boettiger

ENVECON 161 Advanced Topics in Environmental and Resource Economics 4 Units
The roots of environmental and resource economics. Theories of land and resource rent. Models of optimal use of renewable and nonrenewable resources with applications to energy and timber. Balancing environmental and extractive values. Resources, growth, and sustainability. Special topic: the problem of global climate change.
Rules & Requirements

Prerequisites: 100 or Economics 100A or Economics 101A; 101 recommended

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

ENVECON 162 Economics of Water Resources 3 Units
Urban demand for water; water supply and economic growth; water utility economics; irrigation demand; large water projects; economic impacts of surface water law and institutions; economics of salinity and drainage; economics of groundwater management.
Rules & Requirements

Prerequisites: 100 or Economics 100A or 101A; 101 recommended

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

ENVECON C175 The Economics of Climate Change 4 Units
The course will start with a brief introduction and evaluation of the scientific aspects behind climate change. Economic models will be developed to analyze the impacts of climate change and provide and critique existing and proposed policy tools. Specific topics studied are impacts on water resources and agriculture, economic evaluation of impacts, optimal control of greenhouse gases, benefit cost analysis, international treaty formation, discounting, uncertainty, irreversibility, and extreme events.
Rules & Requirements

Prerequisites: 106, 107, Economics 1, or equivalent

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructors: Aufhammer, Fisher

Also listed as: IAS C175

ENVECON C180 Ecological Economics in Historical Context 3 Units
Economists through history have explored economic and environmental interactions, physical limits to growth, what constitutes the good life, and how economic justice can be assured. Yet economists continue to use measures and models that simplify these issues and promote bad outcomes. Ecological economics responds to this tension between the desire for simplicity and the multiple perspectives needed to understand complexity in order to move toward sustainable, fulfilling, just economies.
Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Norgaard

Also listed as: ENE,RES C180

ENVECON C181 International Trade 4 Units
The theory of international trade and its applications to tariff protection. This course is equivalent to UGBA 118; students will not receive credit for both courses.
Rules & Requirements

Prerequisites: 100A-100B or 101A-101B

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 0-1 hours of discussion per week

Summer: 8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

ENVECON C183 Forest Ecosystem Management 4 Units
Introduces students to concepts and quantitative tools needed for the sustainable management of multi-use forest ecosystems. Topics covered include: estimation of ecological, economic, and social values: construction of dynamic forest models, methods for optimal decision-making, and development of forest management plans. Application to current issues in temperate and tropical forest management are discussed. Quantitative, analytical, and communication skills are emphasized. Oral presentation required.
Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 3 hours of laboratory per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Instructor: Potts

Also listed as: ESPM C183

ENVECON 195 Senior Thesis 4 Units
Writing of a thesis under the direction of member(s) of the faculty. Subject must be approved by faculty sponsor.
Rules & Requirements

Prerequisites: Senior standing in Environmental Economics and Policy and consent of instructor

Repeat rules: Course may be repeated for credit. Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 0 hours of independent study per week

Summer:
6 weeks - 0 hours of independent study per week
8 weeks - 0 hours of independent study per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

ENVECON 196 Senior Research Seminar 4 Units
This course is intended as a capstone experience for undergraduates in the major coordinated by one faculty member with participation by others. Following presentations by faculty on researchable topics in their areas of expertise, students will develop ideas for a research paper and discuss in subsequent seminar sessions. Approximately the last five weeks of the semester will be devoted to student presentations of papers either already completed or in progress, and discussion by seminar participants and faculty.
Rules & Requirements

Prerequisites: Student must be a senior with at least a 3.6 GPA in the Environmental Economics and Policy major

Hours & Format

Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

Instructor: Fisher

ENVECON H196 Honors Research 4 Units
Supervised independent honors research specific to aspects of environmental economics and policy, followed by a oral presentation and a written report.
Rules & Requirements

Prerequisites: Upper division standing. Eligibility restrictions related to GPA and unit accumulation. Open only to Environmental Economics and Policy majors in the College of Natural Resources

Repeat rules: Course may be repeated for credit. Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 4 hours of independent study per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Letter grade. Final exam not required.

ENVECON 197 Field Study in Environmental Economics and Policy 1 - 3 Units
Supervised experience in off-campus organizations relevant to specific aspects of environmental economics and policy. Regular individual meetings with faculty sponsor and written reports required.
Rules & Requirements

Prerequisites: Consent of instructor

Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

Repeat rules: Course may be repeated for credit. Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 0 hours of independent study per week

Summer: 8 weeks - 1-3 hours of independent study per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

ENVECON 198 Directed Group Studies for Advanced Undergraduates 1 - 3 Units
Group study of selected topic or topics in Environmental Economics and Policy.
Rules & Requirements

Prerequisites: Consent of instructor

Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

Repeat rules: Course may be repeated for credit. Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 1-3 hours of directed group study per week

Summer: 8 weeks - 1.5-5.5 hours of directed group study per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

ENVECON 199 Supervised Independent Study and Research 1 - 4 Units
Enrollment restrictions apply. Open to qualified upper division students wishing to pursue special study and directed research under the direction of a member of the staff.

Rules & Requirements

Prerequisites: Upper division standing and consent of instructor

Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

Repeat rules: Course may be repeated for credit. Course may be repeated for credit when topic changes.

Hours & Format

Fall and/or spring: 15 weeks - 0 hours of independent study per week

Summer: 8 weeks - 1-4 hours of independent study per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/ Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.